



EDA Consortium Forecast Panel

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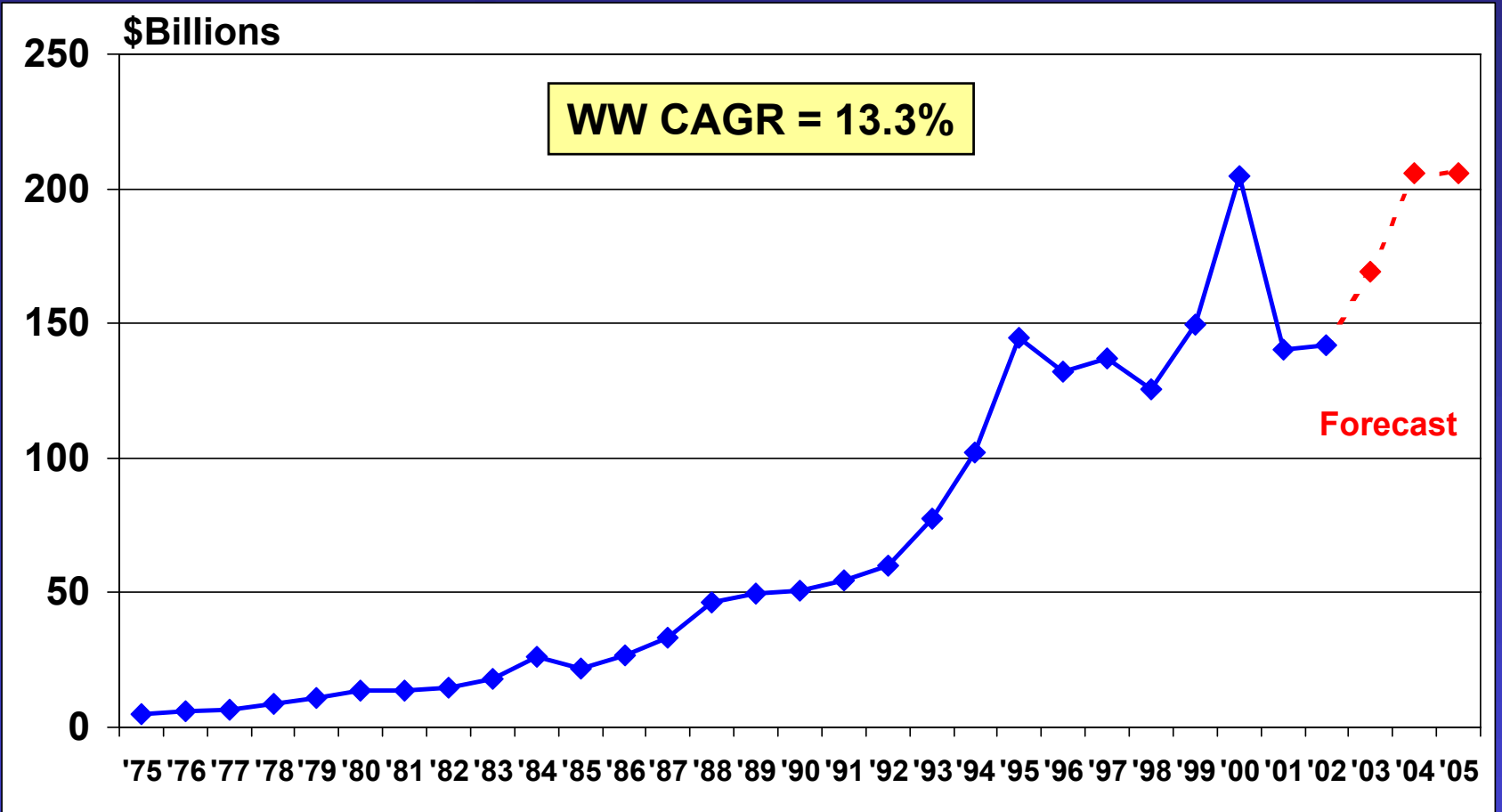
Retrospective on 2002

- Semiconductor units shipment reached bottom in middle of 2002
- 18% of new design starts at 130 nm node
 - Total design cost ~\$20million per project
- Less than 15 design starts using 90nm technology

Source: Dataquest, IBS

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- Continued EDA Consolidation
 - Cadence acquired Simplex, Plato, Antrium
 - Synopsys acquired Avant!, InSilicon, CoDesign
 - Mentor acquired IKOS, Innoveda

Worldwide Semiconductor Sales: 1975-2005



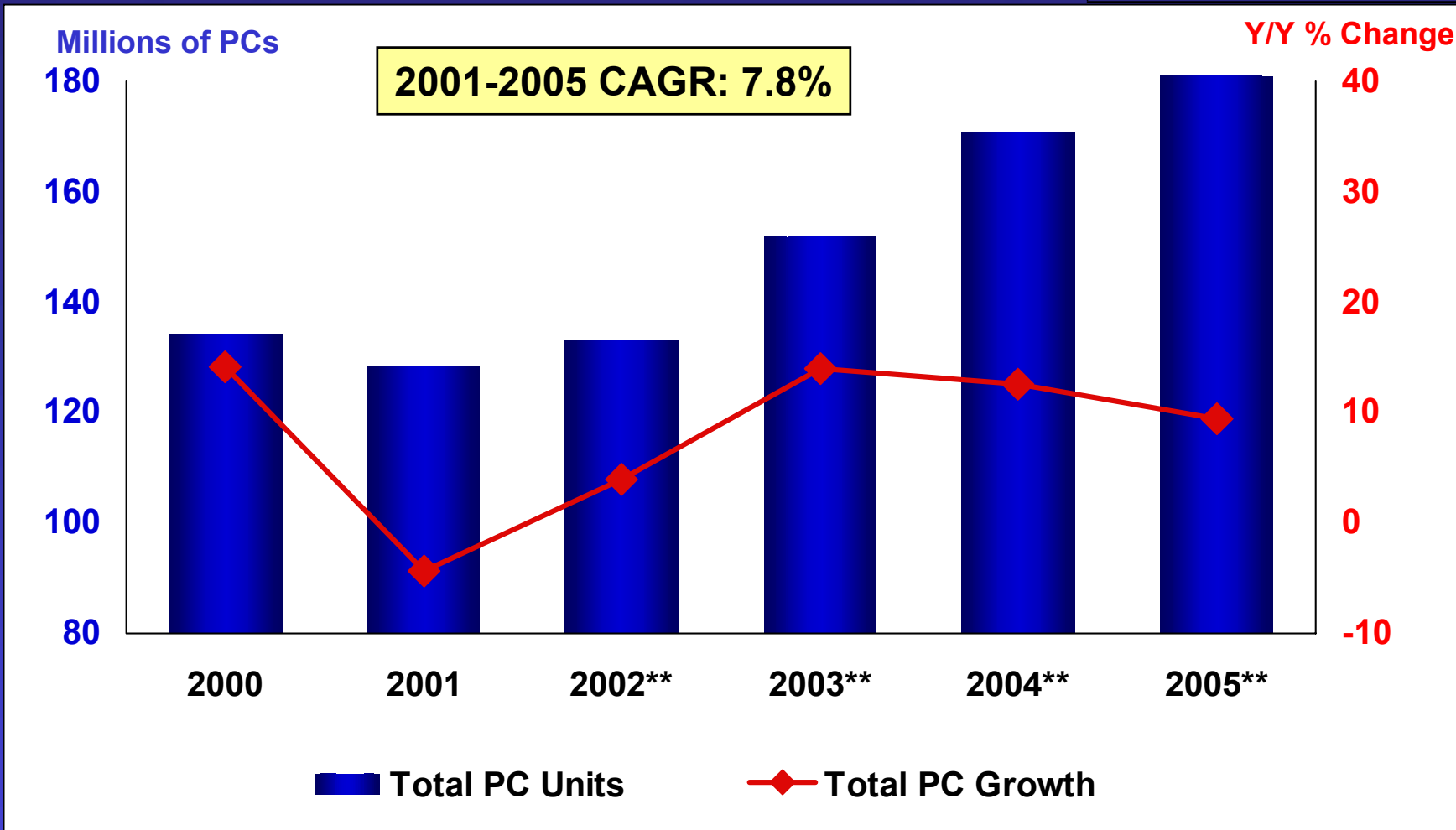
Source: SIA Fall 2002 Forecast



Forecast by Research Organizations

<u>Organization</u>	<u>2003</u>	<u>2004</u>
Dataquest	+12%	
SIA	+19.8%	+22%
iSuppli	+12-15%	+22%
WSTS	+15%	+21%
IBS	+15%	+24%
Semi	+25%	
Future Horizon	+18%	
VLSI Research	+20%	
In-Stat/MDR	+18.1%	

PC Market Forecast*

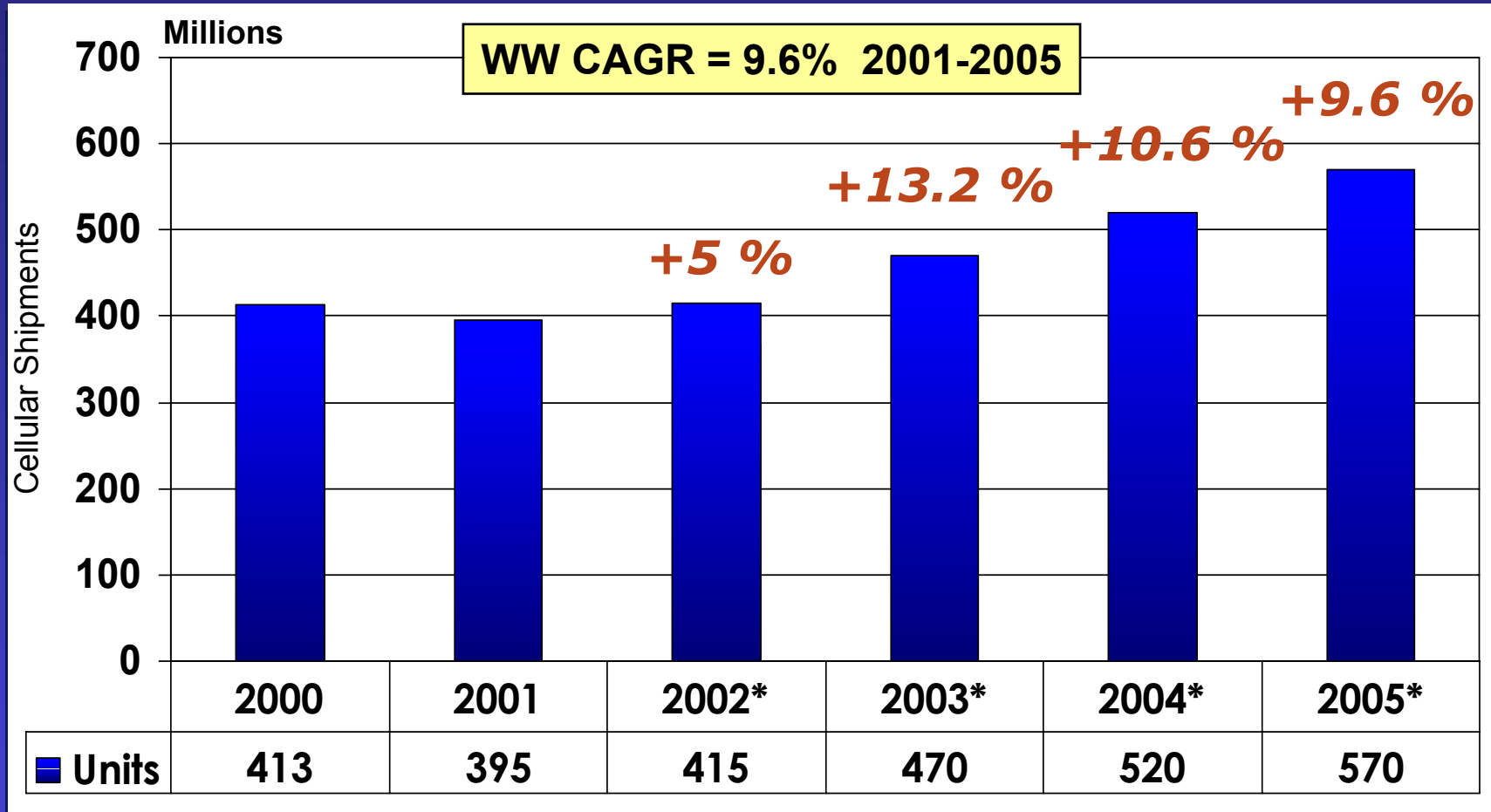


* Includes Servers

Source: iSuppli Corporation

**Forecast

Cellular Handset Forecast in Units

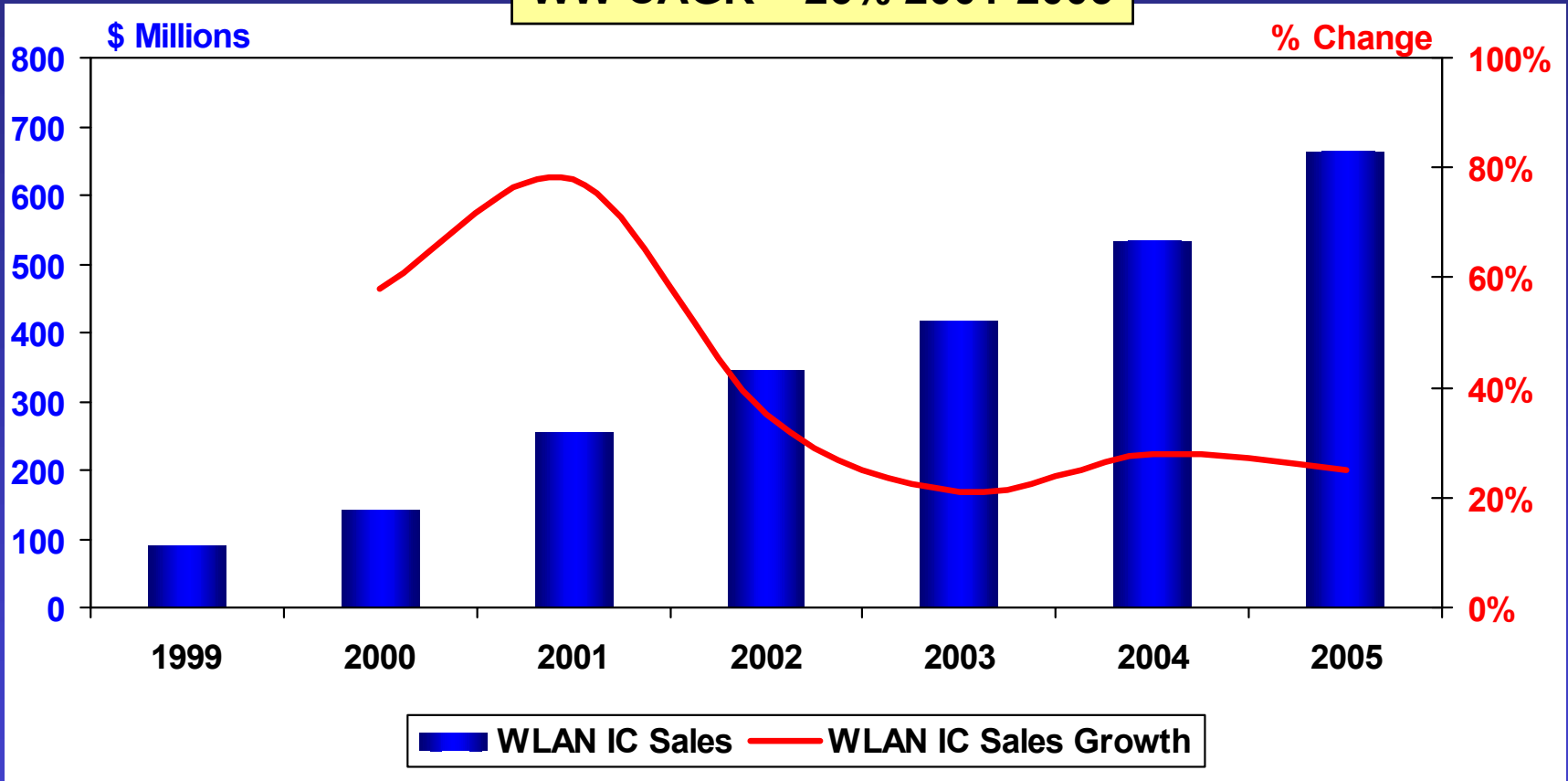


Source: AMD

*Forecast

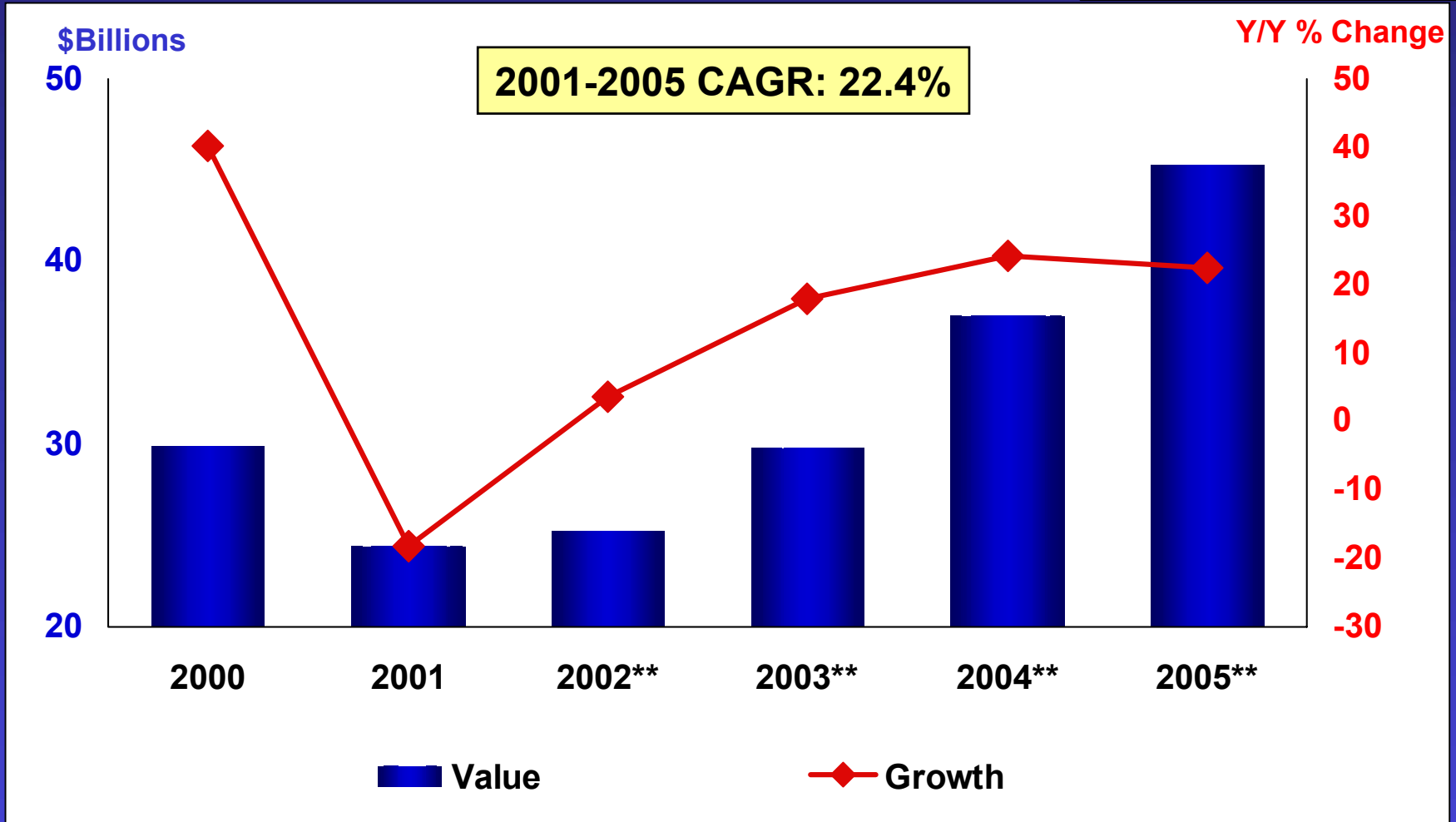
Wireless LAN Semiconductor Growth

WW CAGR = 26% 2001-2005



Source: IDC

Consumer Market Forecast



Source IBS

IBS' Projections for 2003

- Semiconductor's R&D spending will be flat
- 90nm design starts > 50
- 130nm design starts to grow over 50%
- OpenAccess DB will have wider adoption
- Stronger growth for those companies meeting complexity challenge of nanometer silicon

Source: IBS

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- EDA Consolidation will continue
 - Cadence acquired Celestry
 - Synopsys acquired Numerical

Other 2003 Projections/Announcements

- **iSuppli** : DRAM market will grow 17%
NOR flash supply will increase 80%
- **Intel** : Announced >20 % increase for its 128 Mb flash memory products
- **Market Intelligence Center** :
SamSung R&D budgets will grow 16%
- **SIA** : Semiconductor strongest growth areas are :
DSP, flash, consumer, wireless LAN
- **IBS** : Wireless communication IC market will grow 19%
Consumer IC market will grow 18%
Computer peripheral IC market will grow 15%

Our EDA Forecast

- Given a typical 6 month delay of EDA curve behind the semiconductor trend, geopolitical uncertainty and relative flat 2003 IC R&D budgets, we predict :
 - 2 % to 5 % total EDA growth in 2003
 - 10 % to 15 % total EDA growth in 2004
- Certain EDA sectors such as Place & Route and Verification may grow faster than the above EDA averages